

**Water Use Efficiency
Program Assessment and Work Plan - Year 3
December 15, 2002**

CALFED Bay-Delta Program

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BACKGROUND

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WUE Organizational Chart – Please see Figure 1 on page 5

Introduction

The CALFED Water Use Efficiency element, a cornerstone of CALFED's water management strategy, is unique nationally in its magnitude and its aggressive approach to water management. The Water Use Efficiency (WUE) element consists of the following components:

- Agricultural water conservation,
- Urban water conservation,
- Water recycling, and
- Wetlands water management

The WUE element is based on the recognition that although efficiency measures are implemented locally and regionally, the benefits accrue at local, regional and statewide levels.

The ultimate goal of the WUE element is to develop a set of programs and assurances that contribute to CALFED goals and objectives, has broad stakeholder acceptance, fosters efficient water use, and helps support a sustainable economy and ecosystem. The goals of the WUE element will be met by providing financial and technical assistance to local water suppliers and water users to improve water use efficiency. In addition, the WUE element will develop credible assurances and science-based performance measures to demonstrate that CALFED Agencies are implementing an appropriate level of water use efficiency actions.

This document provides a report of past and expected progress on the Water Use Efficiency (WUE) element of the CALFED Bay-Delta Program. This includes a report of progress for implementation during Years 1 and 2 of Stage 1 (Fiscal Years 2000-01 through 2001-02); a Work Plan for Year 3 (Fiscal Year 2002-03) and an assessment of expected expenditures during Stage 1 (Fiscal Years 2000 through 2007).

Record of Decision Actions and WUE Tasks

CALFED's August 2000 Record of Decision (ROD) specified fifteen WUE-specific actions and one Science-related action related to the WUE element (Appendix A contains a description of these actions). Table 1 provides a cross reference between these 16 ROD actions and 17 tasks that have been developed by WUE staff to effectively address these ROD Actions

Table 1. ROD Actions and WUE Tasks

Table 1. Cross-Reference: ROD Actions and WUE Tasks																			
<div>ROD Reference</div> <div>Action No.</div> <div>Action Title</div> <div>Due</div>			<div>WUE Tasks</div> <div>1. Science, Monitoring & Evaluation</div> <div>2. Water Measurement</div> <div>3. Quantifiable Objectives</div> <div>4. Certification</div> <div>5. Agricultural Loans</div> <div>6. Agricultural Grants</div> <div>7. Urban Loans</div> <div>8. Urban Grants</div> <div>9. Ag Technical Assistance</div> <div>10. Urban Technical Assist</div> <div>11. Water Recycling Loans</div> <div>12. Water Recycling Grants</div> <div>13. Recycling Tech Assist</div> <div>14. Recycling Research Grants</div> <div>15. Managed Wetlands Grants</div> <div>16. Wetlands Tech Assist</div> <div>17. Oversight & Coordination</div>																
34	Program Implem. Plan	12/31/00	✓																
35	Public advisory committee	12/31/00																	✓
78	Loan & Grant Program	01/01/01					✓	✓	✓	✓			✓	✓		✓	✓		
76	WUE Finance proposal	07/31/01	✓																
171	Refine Quant. Objectives	Not specified			✓														
79	Establish Milestones	08/27/01																	✓
80, 114, 142, 177, 193, 270, 233	Annual Report	Dec. 31 of Each Year	✓																
77	Define Approp. Measurement	12/31/01		✓															
113	Urban BMP Certification	12/01/02				✓													
141	Water Measm't Legislation	12/01/03		✓															
173	Determine WUE Funding Needs	06/01/04	✓																
175	Technical Assistance	12/01/04									✓	✓			✓			✓	
174	4-year WUE Evaluation	12/31/04	✓																
176	Update Finance Plan	12/31/04	✓																
268	Performance Measures	Not specified	✓																
269	No Transfer Disincentives	Not specified																	✓

Although all CALFED Agencies have the opportunity to contribute to WUE activities, the CALFED Implementation MOU (Attached to the ROD) provided implementation roles for CALFED agencies related to WUE and other Program Elements¹. Lead and Co-lead roles for the 17 WUE Tasks have been assigned to be consistent with the Implementation MOU (Table 2).

Table 2. WUE Tasks and Agency Roles

This table is based on responsibilities under the current governance structure. The new governance structure under the Bay Delta Authority is primarily effective in Year 4.

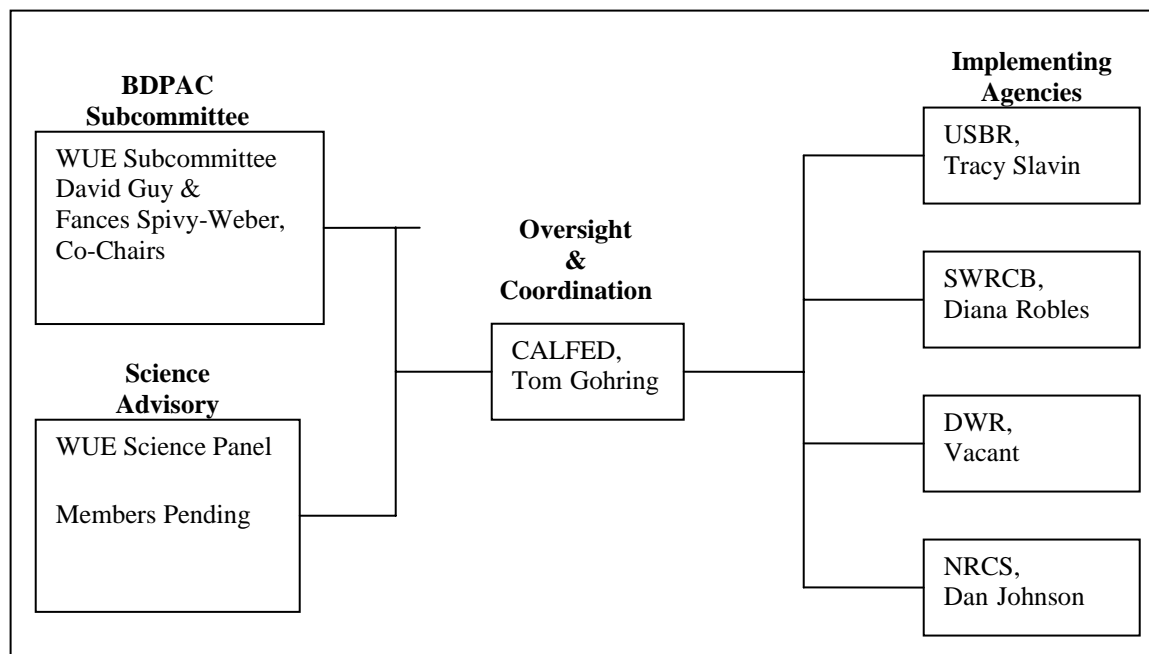
Table 2. CALFED Agency Roles for WUE Tasks						
WUE Tasks	CALFED Agencies					
	CALFED	DWR	USBR	SWRCB	NRCS	CDFA
1. Science, Monitoring & Evaluation	Co-Lead					
2. Water Measurement	Lead					
3. Quantifiable Objectives	Co-Lead					
4. Certification	Lead					
5. Agricultural Loans		Co-Lead				
6. Agricultural Grants		Co-Lead			Lead (farm)	
7. Urban Loans		Co-Lead				
8. Urban Grants		Co-Lead				
9. Agricultural Technical Assistance		Co-Lead			Lead (farm)	
10. Urban Technical Assistance		Co-Lead				
11. Water Recycling Loans			Co-Lead			
12. Water Recycling Grants			Co-Lead			
13. Water Recycling Tech Assist		Co-Lead				
14. Water Recycling Research Grants				Lead		
15. Managed Wetlands Grants			Lead			
16. Managed Wetlands Tech Assist			Lead			
17. Oversight & Coordination	Lead					

¹ The CALFED Implementation MOU (attached to the ROD) delegated the following WUE implementation responsibilities:

- Oversight and Coordination: Policy Group and CALFED Program Staff
- Management of Agricultural & Urban Conservation:
 - Loans & Grants (excluding Central Valley Project Improvement Act (CVPIA) & NRCS): DWR
 - CVPIA WUE financial assistance: USBR
 - Technical Assistance: DWR, USBR, & NRCS (on-farm)
- Management of Recycling:
 - Federal programs: USBR (in coordination with SWRCB)
 - State programs: SWRCB (in coordination with USBR)
- Management of Financial & Technical Assistance for Managed Wetlands: U.S. Fish and Wildlife Service (USFWS)
- Program Support: CDFA (on-farm practices & AWMC)

Although the ROD describes WUE implementation roles for several agencies, only CALFED, DWR, USBR, SWRCB, NRCS are currently involved in WUE activities. Figure 1 shows the relationship between CALFED, the implementing agencies, the WUE Subcommittee, and the as yet formed WUE Science Panel.

Figure 1. Organization of Water Use Efficiency Activities



SECTION I - YEAR 2 PROGRAM ASSESSMENT

A. Accomplishments to Date

This section provides brief descriptions of WUE activities by the CALFED Program and CALFED Agencies during Year 2 of CALFED Implementation. This information is organized by WUE task. The **Year 3 Work Plan (Section II)** includes information on the objectives of each of the WUE tasks as well as descriptions of proposed work during Year 3.

Task 1 – Science, Monitoring & Evaluation

In cooperation with the CALFED Science Program, CALFED agencies made initial progress in developing WUE performance measures and WUE project monitoring.

CALFED Program staff convened a meeting of the CALFED Science staff, members of academia, CALFED Agency staff, and stakeholders to begin developing an approach to monitoring WUE projects. DWR staff used this information to improve the monitoring requirements in the 2002 WUE Proposal Solicitation Package. USBR and CALFED Program staff used this information to develop a consultant scope of services to develop a monitoring methodology for CALFED-funded WUE Projects. The USBR entered into a contract with North State Consultants to execute this scope of work.

CALFED Program and Agency staff worked with the CALFED Science program to develop the scope of the following science teams to ensure that WUE-related work is done in an acceptable manner:

- 1) WUE Science Review Panel
- 2) WUE Science Application Committee

The WUE Science Review Panel will consist of independent scientists and will review the methods, data, and results of WUE science activities. The WUE Science Application Committee will consist of representatives of CALFED Agencies and stakeholders and will provide practical advice on how to apply science in the WUE context.

DWR staff drafted a Work Plan for the Science Application Committee and convened its first two meetings.

DWR appointed the 2002 Water Recycling Task Force from a broad, diverse group of interested stakeholders and agencies, including SWRCB, California Department of Health Services (DHS), USBR, and CALFED. The Task Force will develop a report to the Legislature on overcoming the barriers to recycling of water in California. CALFED Program and SWRCB staff participated in the CALFED/Funding Subcommittee of the Task Force. This subcommittee outlined a white paper to describe the costs and benefits of water recycling projects in California.

Task 2 - Water Measurement and Ag Assurances

CALFED Program staff continued development of Appropriate Water Use Measurement and Agricultural Assurances initiatives.

CALFED Program staff convened an independent scientific panel to help develop the definition of agricultural water measurement (part of ROD Action #77). The panel, which has met two times, is expected to hold its final deliberation in late 2002 after the completion of technical work and stakeholder outreach. The definition is expected to integrate the objectives of water measurement with the practical limits of existing technology and regional variability. DWR and USBR staff participated in these deliberations. CALFED Program staff also made progress on characterizing the costs and benefits of various measurement actions.

Significant progress also was made on establishing Agricultural Milestones (ROD Action #79), which are intended to provide assurance of appropriate implementation of the Agricultural WUE component through stated milestones. CALFED Program staff convened Ad Hoc stakeholder meetings for assistance in developing a comprehensive set of milestones, and associated benefits, remedies and/or consequences. DWR staff conducted four public workshops to solicit input on the draft milestones document. CALFED Program staff incorporated comments and presented the revised document to the WUE Subcommittee and to the Bay Delta Public Advisory Committee (BDPAC).

Task 3 - Quantifiable Objectives

USBR and CALFED Program staff worked to incorporate Quantifiable Objectives into the Draft CVPIA 2002 Criteria for Evaluating Water Management Plans and the Draft Wetlands Water Management Criteria.

CALFED Program staff updated the underlying data for several Quantifiable Objectives and convened three technical briefings with DWR WUE staff to deliver information on the theory and formulation of Quantifiable Objectives. The intent of these sessions was to provide DWR WUE

staff with the tools and background to articulate more Quantifiable Objectives (see Task 3, Section II – Year 3 Work Plan)

Task 4 – Urban Certification

CALFED Program staff/consultants developed a Draft Staff Proposal for Urban Water Conservation Certification which is a conceptual framework for certifying urban water conservation by testing compliance with the terms of the Urban Memorandum of Understanding (MOU). This document was informed by a series of Ad Hoc stakeholder meetings with representatives of urban water suppliers and environmental interest groups.

This framework is intended to guide the development and eventual implementation of an urban water conservation certification process (ROD Action #113). The draft certification document was presented to the plenary session of the California Urban Water Conservation Council and the WUE Subcommittee. It also was discussed with interested members of the public through a series of four public workshops held throughout the state.

DWR, SWRCB, and USBR staff participated in the Ad Hoc work group.

Task 5 – Agricultural Loans

DWR staff made progress in developing a loan solicitation package consistent with and based on funding from the DWR: Proposition 13 – Water Conservation Loan and Grant Program. The loan solicitation will be issued in Year 3.

Task 6 – Agricultural Grants

DWR staff prepared an agricultural grant Proposal Solicitation Package (PSP) that invited feasibility study grants (with minimal funding from Proposition 13) and projects grants (with no available funding). USBR and CALFED Program staff provided review of the draft PSP. DWR awarded 8 feasibility study grants totaling \$800,000. Staff of the CALFED Program, USBR, NRCS, SWRCB and stakeholder organizations reviewed submitted proposals.

USBR staff continued to implement the Water Conservation Field Services Program (WCFSP) and provided agricultural grants totaling \$503,000 (estimated local cost-share is approximately \$500,000).

Through the USDA Environmental Quality Incentive Program (EQIP) NRCS has provided an estimated \$3,515,800 in cost share for about 2,000 on-farm irrigation projects and other water management activities. Local (farmer) contribution was about \$7,648,200. These activities are considered Category B.

NRCS has developed a plan to identify opportunities and constraints to implementing improved water management practices on-farm. A series of meetings will be conducted throughout California with state and local experts and producers to gather the information that will serve as the basis for developing the on-farm grant program. These activities were funded by CALFED through the USBR.

Task 7 – Urban Loans

No urban water conservation loans were available during Year 2.

Task 8 –Urban Grants

DWR staff prepared an urban grant PSP with funding from Proposition 13. USBR and CALFED Program staff provided review of the draft PSP. DWR awarded 29 grants totaling \$9 million

(estimated local cost share was \$2.16 million). These projects are expected to conserve 171 thousand acre-feet of water. Staff of the CALFED Program, USBR, NRCS, SWRCB, and stakeholder organizations reviewed submitted proposals.

USBR staff awarded urban water conservation grants through the WCFSP totaling \$482,000 (estimated local cost-share is approximately \$480,000).

Task 9 & 10 – Agricultural and Urban Technical Assistance

DWR received funding and authority for establishing ten new positions to provide technical assistance for urban and agricultural water conservation, financial assistance, and recycling. Activities included information dissemination, training, direct planning and design service, providing technical staff for the 2002 Recycled Water Taskforce established by AB331, and assistance with Loan and Grant applications.

DWR and USBR jointly funded technical assistance activities of the Agricultural Water Management Council. DWR and USBR also jointly funded technical assistance activities of the California Urban Water Conservation Council.

NRCS continued its on-farm technical assistance program with producers. In association with the EQIP financial assistance program, NRCS assisted producers in the planning, design and design review of water management practices.

Task 11 – Water Recycling Loans

The SWRCB Office of Water Recycling awarded six water recycling loans totaling \$72 million and committing all water recycling construction loan funds, including 1984 Bond law funds. Because water recycling construction grants administered by the SWRCB only provide for twenty-five percent of the construction funding, loan funding from these programs provide financial assistance for the remaining seventy-five percent of the construction costs. Projects receiving SWRCB loan funding contribute to a proposed increase of 36,000 acre-feet per year of recycled water.

Task 12 – Water Recycling Grants

The SWRCB awarded fifteen water recycling grants totaling \$50 million of a total of \$57 Million of water recycling construction grant funds from Proposition 13 (includes remaining Proposition 204 funds). These grant funds provide for twenty-five percent of the construction costs of the project facilities. The remaining seventy-five percent of the construction funding costs are funded by local funds and/or other funding sources (SWRCB loans, USBR, etc.) These projects include the loan funded projects described in Task 11 above, and contribute to the proposed increase of 36,000 acre-feet per year of recycled water.

The USBR awarded 9 water recycling construction projects totaled \$19.7 million which were matched by \$59,193,000 in local cost-share.

Task 13 - Water Recycling Technical Assistance

DWR and SWRCB have played a vital role in the development of the 2002 Water Recycling Task Force. The mission of the Task Force is to convene statewide policy makers to determine the key obstacles to water recycling in California, and make recommendations to the Legislature for solutions to the identified obstacles. SWRCB member Richard Katz serves as the chair of the Task Force; CALFED Director Patrick Wright and DWR Deputy Director Jonas Minton also serve on the committee.

As established in Assembly Bill 331, DWR has taken the lead role in developing the Task Force and the SWRCB is funding the expenses of the Task Force. Additionally, the SWRCB's Office of Water Recycling has loaned one staff person to work solely on Task Force support tasks. CALFED staff is participating in the "CALFED/Funding" subcommittee of the Task Force.

Task 14 – Water Recycling Research Grants

The SWRCB has provided a \$1 million research grant to the WaterReuse Foundation from the Proposition 13 water recycling research grant funds. The SWRCB's \$1 Million grant commitment to the Foundation's existing research program is matched with grant funds from the U.S. Bureau of Reclamation. The National Water Research Institute convened nationwide experts and identified ten research topics as being the highest priorities of research to further the use of recycled water for non-potable uses. Individual research topics within the identified areas of interest are defined by the Foundation and requests for proposals are issued for each topic. The benefits gained by funding granted towards water recycling research are not immediately identifiable as are benefits gained from funding of construction projects.

The SWRCB, in conjunction with the 2002 Water Recycling Task Force, will administer the remaining \$1 million of research grant funds towards statewide research needs identified by the Task Force.

Task 15 – Managed Wetlands Grants

No grants were available in Year 2 for Managed Wetlands.

Task 16 - Managed Wetlands Technical Assistance

The USBR made progress on developing Draft Criteria for water management on wetlands. CALFED Program staff assisted the USBR in incorporating Quantifiable Objectives into Draft Criteria.

Task 17 – Oversight and Coordination

WUE oversight and coordination activities during Year 2 included formal and informal communication among agencies and stakeholders; development and implementation of reporting tools; and ongoing strategic planning.

The primary method of formal agency/stakeholder communication for the WUE element is the WUE Subcommittee to the Bay-Delta Public Advisory Committee (BDPAC). The WUE Subcommittee provides advice and policy recommendations, in the form of advisory statements or documents, to the BDPAC with copies to the CALFED Policy Group. Advice and policy recommendations will incorporate and/or be responsive to input received from WUE Subcommittee members, CALFED agency staff, CALFED Policy Group, and the BDPAC. Policy Group, BDPAC, and the WUE Program Manager may provide direction to and ask WUE-PAC to address issues related to its mission and objectives. During Year 2, CALFED Program staff developed the "charter" and membership of the WUE Subcommittee and convened meetings of the Subcommittee on March 6, 2002 and June 24, 2002.

Informal communication took place during Year 2 through interagency meetings, public workshops, and Ad Hoc work groups as needed.

CALFED Program, DWR, SWRCB, and USBR staff provided information to CALFED management and stakeholders through periodic reports, by contributing data to the CALFED tracking program, and through formal reports like this one.

Because the SWRCB recycling programs are designated as Category A by the ROD, SWRCB staff has increased participation in meetings with CALFED and other Water Recycling funding agencies during Year 2.

B. Program Delays

DWR has not received any eligible agricultural water conservation loan applications (funded by Prop 13). Due to the lack of interest, DWR did not solicit agricultural water conservation loans in Year 2 but expects to have a revised agricultural loan solicitation during Year 3.

The SWRCB has experienced no significant delays in the administering of Proposition 13 funds to local agencies for water recycling projects. Delays on project funding obligations that have occurred are due to difficulty of local agencies in completing required environmental documents/procedures (i.e. California Environmental Quality Act requirements, State Historic Preservation Office clearance, etc.).

As of June 2002, only \$9.3 million remain of the SWRCB's Proposition 13 - 2000 Bond Law Water Recycling funds for southern California remain to be committed. Three southern California agencies are proposed to receive water recycling construction grant commitments by October 2002, completely committing all Proposition 13 construction funds for water recycling facilities.

The SWRCB's Office of Water Recycling is currently involved in the funding approval process to commit further grant funding to five local agencies for the construction of recycled water facilities. However, recent legislation lacked the appropriation of further funds into the water recycling sub-accounts. As a result, the funding process for these agencies has been placed on hold.

The USBR has experienced no significant delays in implementation of the WCFSP in the Central Valley.

The NRCS has experienced delays in providing on-farm water conservation technical assistance at the desired level. Staffing constraints and the demands of administering financial assistance programs has limited technical assistance.

NRCS progress on developing recommendations for the on-farm grant program has been delayed due to priority work being done on other WUE tasks as well as other agency priorities. The on-farm grant program will be the year 3 priority.

CALFED continues to experience significant delays in executing contracts for outside services needed to support program implementation. Critical services that have been delayed include facilitation services needed to effectively convene stakeholder work groups and technical services required to determine the costs and benefits of water measurement. As a result, progress on two ROD commitments – appropriate water use measurement and agricultural milestones – is moving forward more slowly than expected (see section below.)

C. Status of Rod Commitments

The following WUE ROD Commitments had deadlines prior to the end of Year 2:

- Program Implementation Plan (ROD Action #34): Due 12/31/00

- Public advisory committee (ROD Action #35): Due 12/31/00
- Loan & Grant Program (ROD Action #78): Due 01/01/01
- Finance proposal (ROD Action #76): Due 07/31/01
- Establish Agricultural Milestones (ROD Action #79): Due 08/27/01
- Define Appropriate Measurement (ROD Action #77): Due 12/31/01
- Annual Report (ROD Action #80): Due 12/31/01

All of these tasks have been completed except Task 77 – Define Appropriate Measurement ROD Action #77 is scheduled to be completed in Mid-2003 which will allow the dependent ROD Action #141 (Water Measurement Legislation) to be completed on schedule during the 2003 California Legislative session.

SECTION II - YEAR 3 WORK PLAN

A. Tasks and Schedule

Note: Major Work Products (Products) and due dates related to the tasks described below are listed in Table 3.

Task 1 – Science, Monitoring & Evaluation

The CALFED Science Program is responsible for insuring the overall scientific rigor and integration of the scientific linkages among all CALFED Program Elements. However, each CALFED Program Element is responsible for providing for the application of science to its own program. The application of science to the CALFED Water Use Efficiency Program Element will be supported by two teams, the WUE Science Review Panel (SRP) and the WUE Science Application Committee (SAC). This Action Plan serves as a road map for application of science and scientific review of WUE Program Element. The work plan for the SAC and the SRP will be developed by the respective committees. The structure, objectives and functions of the SRP and SAC are described below. These descriptions are under review by CALFED agencies and stakeholders and are expected to be finalized in early 2003.

Objectives

The SRP and SAC Science Teams will facilitate the application of scientific rigor to the design and evaluation of WUE-funded projects. More specifically the objectives are to:

- 1). Assure that the “best available” science is being used in implementing the various WUE-funded activities;
- 2). Monitor and evaluate projects for WUE benefits resulting from WUE-funded projects and verify that they are achieving the intended outcomes; and
- 3). Provide a basis for engaging in adaptive management to guide the WUE-funded Program activities toward optimizing the progress (in terms of reduced irrecoverable losses, improved water quality, and attained environmental benefits) being made in achieving the desired CALFED Goals within the available financial and staffing resources.

The SAC is responsible for providing insight and advice to implementing agencies on the application of science in WUE-funded applied research, pilot projects, and implementation projects. The SAC will also assist in identifying research priorities, quantification of costs and benefits, and quantification of future water use efficiency estimates. Additionally, the SAC will

serve as a communication forum among water management communities to share findings of their respective projects.

The SRP is responsible for evaluating the soundness of the science underlying the agricultural, urban, and recycling components of the WUE Program. The SRP will also review and critique critical work products from implementing agencies and develop scientific linkages between WUE and the other CALFED Program Elements.

Science Application Committee

Scientific Functions

A systematic monitoring and evaluation program is necessary to characterize, quantify, and validate information and knowledge gained from the implementation of WUE-funded projects. In some cases the implementation of measures to increase efficiency in agricultural and urban settings has been done without collecting sufficient data and information to fully understand the underlying cause and effect relationships. The WUE science application will ensure that the monitoring of WUE-funded project provides sufficient data to track changes and validate (or refute) the underlying assumptions. Thus necessary research can be identified and incorporated into the program through adaptive management. Three basic scientific functions are to:

- 1). Monitor WUE-funded projects** – Monitoring is necessary to obtain the data needed to determine the benefits of the WUE-funded projects. Each project accepted for WUE-funding will need to include a monitoring plan that the grant recipient (or their consultants) will be required to carry out. Data collection plans and protocols by the applicant should be designed to provide the data needed to quantify the progress being made toward achieving the WUE benefits identified in relation to ROD and/or be consistent with the appropriate applied research components. Monitoring requirements of individual projects must have a reasonable cost. Implementation of WUE practices and programs should not be overlooked by over-expenditure of monitoring and evaluation. Also, environmental justice considerations and necessary accommodations have to be provided to the smaller and disadvantaged communities so they can compete for funding as agencies' demand for monitoring, evaluation, and science increases.
- 2). Evaluate WUE-funded Project Performance and Make Future Projections** – The monitoring data will be evaluated to assess WUE-funded project and program performance including the benefits and costs. Where applicable, the evaluation will require a broader programmatic assessment involving review by other disciplines. It is anticipated that the information gained from assessing the outcomes of the projects will be useful for estimating the costs and benefits of future WUE-funded projects, both for CALFED's Stage 1 (through 2007) and until 2030.
- 3). Initiate, Conduct, and Review Applied Research** – Areas where research is needed to strengthen the credibility of the science underlying the WUE Program and fill knowledge gaps include: 1) identifying and testing critical agricultural and urban WUE assumptions; 2) identifying data gaps; (3) developing data collection plans and protocols for monitoring current and ongoing WUE-funded projects; 4) developing and validating water conservation inference models; 5) examining fundamental cause-and-effect relationships- for use in project performance and water use efficiency projections; and 6) identifying new opportunities for water conservation.

Science Application Committee Functions

The SAC is responsible for advising implementing agencies on the application of science. SAC roles are to:

- 1). Facilitate WUE science–related actions by advising the implementing agencies on science-related subjects;
- 2). Propose or review scopes of work for research, targeted studies, data collection, data analysis, and project assessment;
- 3). Advise on quantification of the costs and benefits and projection of future WUE projects;
- 4). Communicate among water management communities on findings of WUE projects.

The SAC's membership will include a mix of standing and ad hoc CALFED and CALFED agency/partner staff, water agency project managers, stakeholders, and consultants. The SAC will be managed by one of the CALFED implementation agencies (DWR, USBR, and SWRCB) on a rotational basis. The SAC meetings/communications will be organized around sub-committee focus group interests and convened on an as needed basis. A committee similar to the SAC with limited membership was established in 2001. DWR will invite other interested individuals, through the WUE Subcommittee, to participate in SAC activities.

The SAC's immediate tasks are to:

- 1). Advise the implementing agencies on the monitoring requirements of the proposed projects;
- 2). Advise DWR regarding the criteria for scientific and economic evaluation of project proposals for the upcoming proposal solicitation packages; and
- 3). Analyze the monitoring and evaluation of current urban and agricultural WUE-funded projects.

These three tasks, which are presented in greater detail below, will provide the SAC with a challenging committee learning and organizational experience. After completing them the SAC should be prepared to provide advice for carrying out subsequent tasks. Examples of such subsequent tasks include: 1) evaluating the results of the individual and collective (within a region) WUE-funded projects; 2) recommending adaptive management changes and applied research needs where necessary to meet the desired WUE goals; and 3) making projections of potential costs and benefits from WUE projects through 2007 and beyond.

Preliminary efforts of DWR OWUE and CALFED staff have produced the following three recommendations:

1). Include Monitoring Requirements in Proposal Solicitation Package (PSP)

The SAC will provide advice to implementing agencies to ensure that the proposal solicitation package (PSP) includes, among other things, sufficient information on monitoring plan requirements. PSP should include a general outline of the data collection and management that the applicant will be required to include in the proposals giving special attention to pre-project baseline data and subsequent changes in water quality and quantity along various system flow paths. The basic monitoring strategy should be focused on CALFED ROD objectives (reduced irrecoverable losses, improved water quality, and attained environmental benefits). For research projects, the PSP

should include a clear definition of the problem or issue needing research. The monitoring and reporting requirements should be included in the contractual language.

2). Include Scientific and Economic Evaluation Criteria and “Score Sheets” in PSP

The implementing agencies are responsible for evaluating, selecting, and administrating the project proposals received in response to the PSP. The implementing agencies’ Science Review Team (a team established by CALFED and implementing agencies to evaluate the scientific merit of the proposals) will use “score sheets” to evaluate the scientific/technical and economic aspects of the proposals. The purpose of the evaluation is to ensure that the “quantification of potential water savings” is reasonable and the methods, procedures, and monitoring components articulated in the proposals meet established scientific criteria.

It is suggested that the “score sheets” developed for the technical/scientific and economic evaluation of proposals be included in the PSP. This will assist potential applicants by providing them with information on how their proposals will be evaluated in terms of technical, scientific, and economic merit.

The SAC’s role in this process will be to review past PSP scientific/technical and economic evaluation score sheets and provide comments regarding them to DWR staff. The score sheets may cover the technical content, scientific and economic merit, soundness of assumptions and methodologies, technical and economic feasibility, and completeness of the monitoring and evaluation program for both implementation and other project types. DWR staff will use the SAC comments to prepare score sheets for the 2003 PSP.

SAC may also be ask to develop and recommend to the implementing agencies additional or revised data collection, management, and analysis methods and procedures for the proposed projects under review.

3). Review Monitoring and Evaluation Components of Current-Funded Projects

One of the SAC’s major roles will be to provide scientific advice to implementing agencies for WUE-funded project evaluation. A USBR funded contract related to monitoring of WUE-funded projects is just getting underway. This contract was awarded to Davids Engineering who is carrying out the following three tasks:

- **Task 1** is to review the existing WUE-funded projects. The purpose of this review is to find projects that have collected data or have the potential for data collection.
- **Task 2** is to develop, in conjunction with the grantee, a monitoring plan and to collect data for the next 18 months.
- **Task 3** is to summarize the information and make it available for adaptive management, PSP review or PSP criteria development.

The SAC can provide advise to the USBR program manager and the consultant to assure that the monitoring plans developed in Task 2 supply the necessary data for assessing the costs and benefits of the selected projects. The SAC may also provide feedback to the USBR for Task 3, especially in terms of PSP criteria development.

Science Review Panel

The major responsibilities of the WUE Science Review Panel are to: (1) evaluate the soundness of the science underlying the agricultural, urban and recycling components of the WUE Program; (2) recommend additional applied research where necessary; (3) review and critique the scientific support for critical works from agencies and the Science Application Committee², with emphasis on the conclusions reached from project monitoring and evaluation; and, 4) understand or develop the scientific linkages between the WUE-funded projects and the other CALFED Program elements. The Panel's work is considered to be a critical component of CALFED's oversight and coordination responsibilities.

In carrying out its work, the WUE Science Review Panel will seek to better understand the various causalities – physical, behavioral, institutional, economic, biological and chemical – expected to impact WUE implementation. This will necessitate a likely focus on the following components of the WUE element:

- Methods for monitoring, data collection, and data analysis of water conservation and recycling projects
- Results of WUE monitoring
- WUE research priorities
- Past and projected WUE Program performance (WUE performance measures³)
- Quantifiable objectives
- Proposal Solicitation Process criteria and scientific review
- Integration with the broader CALFED program
- Program design, implementation strategies, and relevance to stakeholder communities
- Other issues as identified by the Panel or Program Manager

This initiative – to be launched in 2003 – is guided by several key principles:

- **Review-focused.** As is the case for the CALFED Science Program, the WUE Science Review Panel will not be directly involved in making policy or funding decisions. Rather, its function will be to review ongoing and proposed WUE program activities. It will work to ensure that the WUE Element incorporates the best available knowledge into decisions. It will also work toward narrowing scientific uncertainties, advancing the application of better knowledge, and forwarding the debate.
- **CALFED-wide science integration.** The development of applicable and sound science to support and guide CALFED activities will require effective coordination and integration of scientific activities among CALFED's various Program Elements.
- **Open process with stakeholder involvement.** CALFED's Record of Decision calls for WUE science activities to be conducted in an open and collaborative manner to allow

² The Science Application Committee is a Department of Water Resources-led body that has three primary roles: (1) coordinating WUE science-related actions; (2) developing or reviewing scopes of work for proposal review, targeted studies, data collection, data analysis, project assessment and research; and, (3) providing input in water use efficiency projections. Its membership includes the California Bay-Delta Authority and CALFED agency/partner staff, water agency project managers, stakeholders and consultants.

³ Performance measures represent estimates of WUE costs and benefits (e.g. volume water conserved), including past performance (post-ROD) and projections of likely future performance.

and encourage involvement of and input from stakeholder and academic science communities. Consequently, the WUE Science Review Panel's deliberations will be conducted in public. Additionally, CALFED-convened, stakeholder groups representing diverse agricultural, environmental and agency interests will serve as a sounding board regarding Panel design, recruitment, and intended outcomes of panel deliberations.

- **Balance and neutrality in Panel recruitment.** The WUE Science Review Panel – like all CALFED standing science boards or panels – will strive for balance between local and outside knowledge, relevant disciplines, academic/private sector/regulatory agency scientists, gender and ethnicity. Scientists with perceived attachments to stakeholder groups or regulatory activities in the regulatory agencies will not, *a priori*, be excluded from the Panel. But individuals chosen must have exceptional reputations for maintaining a balanced view.
- **Legitimacy and accountability.** To ensure that WUE Science Review Panel activities are credible and result in advice useful to CALFED and accepted by stakeholders, it is essential that the Panel's composition and work be structured to foster legitimacy, accountability and neutrality. Accordingly, the Panel selection process and operating procedures below incorporate key elements – meaningful stakeholder involvement, criteria to guide panelist and technical advisor selection, and deliberations in public – that are intended to facilitate such an atmosphere.

SCOPE OF WORK/DUTIES:

The duties of Science Review Panel members will include:

1. Bring detailed expertise to bear on scientific issues of concern to the CALFED WUE Element. This may include: identifying/prioritizing critical issues; proposing and participating in workshops on critical subjects; working with the WUE Program Manager to help identify critical strategic questions and cross-program linkages; and proposing subjects for white papers, reviews, or studies that are critical to CALFED WUE goals.
2. Coordinate with the CALFED Science Program and other CALFED Program Science Panels on issues involving cross-program linkages.
3. Review (or obtain reviews for) documents, proposals describing major WUE initiatives, the annual planning process for specific actions, and the mission, goals, and performance of the WUE Element.
4. Advise individually, or via participation in review committees or workshops, on specific technical questions that arise as research and monitoring aspects of the WUE Element evolves.
5. Analyze existing data related to specific actions or programs, as relevant to reviews or advising described above. Where not in conflict with consulting roles, conduct or lead studies relevant to accomplishing CALFED WUE goals.
6. Analyze stakeholder responses to WUE initiatives.

PANEL ORGANIZATION:

Panel Size and Areas of Expertise

The WUE Element intends to recruit up to 6 nationally and/or internationally recognized experts specializing in one or more of the following primary areas: 1) agricultural water management, 2) urban water management, 3) ecology, 4) resource economics, 5) hydrology and 6) organizational/behavioral dynamics. These experts will collectively provide scientific and technical expertise in the following disciplines: engineering; urban/agricultural water conservation practices; surface- and ground-water hydrology; hydraulics; water treatment and recycling; statistical analysis; public policy; and, public outreach. Moreover, the fully constituted panel is expected to be familiar with and able to integrate issues related to water quality, water supply reliability and ecosystem restoration.

The Panel will include a Panel Chair. The Panel Chair will be responsible for working with the Authority's WUE Program Manager and other staff/consultants to prioritize Panel work, identify needed resources, co-facilitate meetings and ensure the Panel stays focused and meets deadlines. The Panel Chair also will take the lead in coordinating with the CALFED Science Program and other CALFED Program review panels.

Selection Process and Criteria

Authority staff/consultants will coordinate with the CALFED Science Program, other CALFED agencies, and stakeholders to establish selection criteria for and recruit up to 6 independent scientists to serve on the WUE Science Review Panel. Names of potential panelists will be solicited from the WUE Subcommittee, the CALFED Science Program and other interested CALFED Agency staff and stakeholders. Ideally, a minimum of two of the WUE Science Review Panel members will also hold appointments as standing members of either the CALFED Science Board or other CALFED program scientific review panels.

Qualified panelists must have appropriate scientific expertise, be capable of accomplishing the stated duties, and meet the required selection criteria. These selection criteria may include all or part of the following:

- Extensive knowledge of the Bay-Delta watershed and Bay-Delta watershed issues;
- Extensive and/or intensive knowledge concerning Water Use Efficiency issues (as evidenced by long-term experience managing or promulgating science in the area of Water Use Efficiency, talks in scientific contexts, or substantial publications);
- Stature in the broad scientific community (as evidenced by invited talks, history of workshop participation, history of scientific leadership such as organizing sessions or conferences);
- A record of publication in peer reviewed scientific literature in the area of expertise identified;
- Experience managing environmental issues or advising top managers and promoting the use of science in water use efficiency;
- Ability to weigh issues in a balanced, objective manner, as reflected in the perceived willingness/ ability to integrate diverse viewpoints;
- Ability to work collaboratively and think across disciplines; and
- Availability throughout the duration of the appointment.

The Panel Chair, in addition to meeting the above criteria, must have a demonstrated ability to lead complex, independent science panels and foster integration across disciplines and programs.

Panel Procedures and Terms:

The Panel is expected to be convened in 2003. It will meet approximately four times a year. Each panel member will serve for a four-year term with the possibility of re-appointment. Terms will be staggered to avoid gaps in institutional memory.

PANEL MANAGEMENT, FACILITATION AND PUBLIC INVOLVEMENT

The Authority is responsible for convening the Panel. The Authority's WUE Program Manager, in his/her oversight and coordination capacity, is directly responsible for guiding the Panel's activities. This includes working with the Panel chair and members to identify issues needing Panel input; prioritize Panel activities; provide the appropriate resources to support the Panel's deliberations; and, regularly update the WUE Program and Panel's work plan to adapt to Panel findings and recommendations.

CALFED proposes to engage the services of CONCUR, Inc. to assist the Panel chair in facilitating the WUE Science Panel's deliberations. Facilitation activities will include ensuring efficient and complete information flow between panelists, the WUE Subcommittee, Authority staff and CALFED implementation agencies; development of meeting agendas; and recording meeting outcomes and public comments.

A broad range of stakeholders and other interested parties will be invited by CALFED to observe WUE Science Review Panel deliberations. The public will be given periodic opportunities to address the Panel. The staff of the Department of Water Resources, the Natural Resources Conservation Service, the State Water Resources Control Board, and the U.S. Bureau of Reclamation are also expected to actively participate in these meetings.

Table 3. WUE Year 3 Major Work

Table 3. WUE Major Work Products				
Work Product Number & Description		Due Date	Responsible Agency	Related WUE Subtask & Task
1.00	WUE Science Deliverable	Under Development		1. Science, Monitoring & Evaluation
2.01	Def: Appropriate Measurement of Ag Water Use	Dec '02	CALFED	2. Water Measurement
2.02	TM: Approach to Defining Approp. Urban Meas.	Sep '02		
2.03	Def: Approp. Measurement of Urban Water Use	Mar '03		
2.04	Draft Components of Water Meas. Legislation	May '03		
2.05	Agricultural Milestones	Sep '02		
3.01	Meeting Agendas & Key Outcomes: QO Training	Dec '02	CALFED	3. Quantifiable Objectives
3.02	TM: Review of Existing Quantifiable Objectives	Mar '03	DWR	
3.03	Updated Doc: Details of Quantifiable Objectives	May '03		
3.04	Draft Wetlands Water Management Criteria	Jun '03	USBR	
4.01	Final Framework: Urban Water Cons. Certification	Sep '02	CALFED	4. Certification
4.02	Draft elements of Certification Legislation	Dec '02		
5.01	Proposition 13 Ag Loan Solicitation	Mar '03	DWR	5. Ag Loans
6.01	Water Conservation Field Service Program	Mar '03	USBR	6. Ag Grants
None				7. Urban Loans
8.01		Nov '02	DWR	8. Urban Grants
9.01	TM: Best Approaches to On-Farm WUE Incentives	Apr '03	NRCS	9 & 10. Ag/Urban Tech. Assist.
None				11. Recy Loans
12.01	Proposition 13 Water Recycling Grant Awards	Continuous	SWRCB	12. Recycling Grants
12.02	Title XVI Recycling Grant Awards	Sep '03	USBR	
13.01	2002 Water Recycling Task Force Report	Apr '03	SWRCB	13. Recycling Tech Assist
13.02	White Paper: Water Recycling Costs and Benefits	Sep '02	CALFED & SWRCB	

Continued...

Table 3. WUE Major Work Products (continued...)				
Work Product Number & Description		Date	Agency	Related WUE Subtask & Task
None				14.RecyResrch
None				15.Wtlnds Grnt
16.01	Criteria for Water Management on Wetlands	Sep '03	USBR & CALFED	16.Wtlnd Tech
17.01	Annual WUE Assessment and Work Plan	Sep '02	CALFED	17. Oversight & Coordination
17.02	WUE Annual Report	Dec '02		
17.03	WUE Tracking Report	Oct '02		
17.04	WUE Subcommittee Meeting Materials	Varies		

Task 2 - Water Measurement and Ag Assurances

Objectives: CALFED policy-makers recognized that there is a perception among some CALFED stakeholders that existing approaches to water use measurement are inadequate. Accordingly, two ROD Actions – #77, Define Appropriate Measurement and #141, Water Measurement Legislation – commit CALFED to resolve measurement issues. ROD Action #77 involves developing a consensus definition of appropriate measurement of water in agricultural and urban sectors. ROD Action #141 directs CALFED to draft legislation (for introduction in the 2003 California Legislative session) that would require appropriate measurement of all water uses in the state – including surface and groundwater.

The ROD also directed CALFED to establish Agricultural Milestones (ROD Action #79) which is to provide assurance of appropriate implementation of the Agricultural WUE component through stated milestones, and associated benefits, remedies and/or consequences.

Planned Activities: CALFED Program staff will convene the final deliberation of the independent scientific panel in fall 2003 to develop the agricultural component of the definition of appropriate measurement of water use. DWR, SWRCB, and USBR staff will participate in these deliberations. This will be closely followed by a staff draft of the definition of appropriate measurement of agricultural water use (Product 2.01). CALFED Program staff will solicit CALFED Management and public review of the draft definition.

CALFED Program staff will conduct in-depth stakeholder interviews to determine the scope and appropriate process for developing the definition of appropriate measurement of urban water use (Product 2.02). CALFED Program staff will then: 1) conduct the necessary background technical work; and 2) initiate an appropriate process to effectively gather ongoing input from urban and environmental stakeholders. DWR, SWRCB, and USBR staff will participate in this process. The product of these activities will be a draft definition of appropriate measurement of urban water use (Product 2.03). CALFED Program staff will solicit CALFED Management and public review of the draft definition.

Using the agricultural and urban water measurement definitions described above, CALFED Program staff – with appropriate BDPAC and CALFED Policy Group concurrence – will work with the State Legislature to draft elements of water measurement legislation (Product 2.04).

CALFED Program staff completed the Agriculture Milestones (ROD Action #79).

Task 3 - Quantifiable Objectives

Objectives: CALFED has developed a list of 200 potential Quantifiable Objectives, practical contributions that can be made to the Bay-Delta system through agricultural water management.

These Quantifiable Objectives were developed during CALFED's planning phase to provide stakeholders with tangible yet practical agricultural WUE performance measures. CALFED Program Staff has articulated (quantified) 60 of those 200 potential Quantifiable Objectives. During implementation, CALFED agencies will refine existing Quantifiable Objectives and articulate more as part of an overall effort to develop quantified performance measures using rigorous science (see Task 1 – Science, Monitoring and Evaluation above).

Planned Activities: DWR staff, using available information, will refine and review existing Quantifiable Objectives (Product 3.02) and articulate several more Quantifiable Objectives during Year 3 (Product 3.03). USBR staff will continue to incorporate Quantifiable Objectives

into the Draft CVPIA 2002 Criteria for Evaluating Water Management Plans and the Draft Wetlands Water Management Criteria (Product 3.04). CALFED Program staff will provide the information and training to DWR and USBR necessary to assist their articulation of the already identified Quantifiable Objectives (Product 3.01).

Task 4 – Urban Certification

Objectives: The ROD directed CALFED to develop a method for certifying urban water conservation by building upon the work of the California Urban Water Conservation Council (CUWCC), a non-profit organization consisting of urban water suppliers, environmental organizations and other interested parties. The CUWCC's Memorandum of Understanding (MOU) is a broadly supported agreement that specifies 14 urban water conservation best management practices (BMPs).

CALFED Program staff has developed a proposed conceptual urban certification framework consistent with the following driving rationales: (1) certify compliance with the CUWCC's MOU and build upon the CUWCC's experience and expertise; (2) rely on an independent entity, not the CUWCC, to take on the formal certification and appeals responsibilities; (3) develop a framework in a balanced manner that furthers conservation efforts, supports CALFED objectives and preserves the MOU's flexibility; (4) build capacity and awareness among smaller and disadvantaged water suppliers; (5) focus certification initially on a limited number of water suppliers; (6) minimize redundancies and inconsistencies with existing regulatory and planning processes; and, (7) recognize the value of and need for an adaptive management approach.

Planned Activities: CALFED Program staff will finalize the proposed conceptual framework for certifying urban water conservation following review by the BDPAC and CALFED Policy Group (Product 4.01). Staff will continue to work with DWR, USBR, and the California Urban Water Conservation Council (CUWCC) to resolve the outstanding technical issues described in the certification framework. Staff will also continue to work with the California Public Utilities Commission to resolve issues related to compliance by Investor Owned Utilities. CALFED will begin drafting components of legislation required for SWRCB to implement Urban Water Conservation Certification (Product 4.02).

Task 5 – Agricultural Loans

Objectives: A primary objective of the CALFED WUE element is to facilitate implementation of WUE actions at the local level – by cities, water suppliers, and farmers. CALFED agencies use low interest loans to help local entities overcome financial barriers to WUE implementation.

Planned Activities: DWR will release the second Proposition 13 Agricultural Loan Program application package during Year 3 (Product 5.01). Agricultural Water Conservation Loans will be available on an ongoing basis until the remaining Proposition 13 agricultural water conservation funds are awarded.

Task 6 – Agricultural Grants

Objectives: As with loans, CALFED agencies also use grant funding to invest in local WUE implementation.

Planned Activities: USBR will continue the Water Conservation Field Service Program in Year 3 at higher funding levels than FY 02. \$1.21 million in funding is available (Product 6.01).

USDA, NRCS EQIP funds for on-farm practices are expected to increase significantly and may triple for Year 3. Funding could exceed \$5,000,000. These activities may be considered for inclusion in Category A.

Task 7 – Urban Loans

Objectives: CALFED agencies use low interest loans to help local entities overcome financial barriers to WUE implementation.

Planned Activities: No urban water conservation loans will be available during Year 3.

Task 8 –Urban Grants

Objectives: CALFED agencies use grants to help local entities implement WUE projects.

Planned Activities: DWR will release the third WUE Proposal Solicitation Package in Year 3. \$18 million of Proposition 13 funds are available for urban grants (Product 8.01). Staff of the CALFED Program, NRCS, SWRCB, USBR, and stakeholder organizations will provide review of the draft PSP and the proposals. USBR will continue the Water Conservation Field Service Program in Year 3 at higher funding levels than FY 02. \$1.21 million if funding is available.

Task 9 & 10 – Agricultural and Urban Technical Assistance

Objectives: CALFED agencies provide technical assistance to help local entities: (1) assess the costs, benefits, and feasibility of potential WUE projects; (2) determine the best approach to implement WUE actions; (3) effectively prepare grant and loan applications; and (4) comply with WUE reporting requirements (e.g. related to urban water conservation certification).

Planned Activities: DWR staff will provide technical assistance in a variety of ways including through staff, contractors or consultants, and through the staff of cooperating agencies and organizations such as water suppliers, the AWMC, and the CUWCC. Activities will include information dissemination, training, direct planning and design service, and assistance with Loan and Grant applications.

The USBR will continue to provide funding and guidance to the Agricultural Water Management Council and the California Urban Water Conservation Council. USBR will also continue to provide technical assistance on new and innovative water measurement through cooperative agreements with the Irrigation Training and Research Center (at Cal Poly, San Luis Obispo) Cal State University at Chico, and the Center for Irrigation Technology (at Fresno State University).

NRCS will continue outreach activities to determine priorities for on-farm WUE grants and technical assistance. These activities will include a series of public meetings geared toward irrigators and growers. NRCS staff will produce a technical memorandum describing the best approaches to providing financial incentives to on-farm water conservation (Product 9.01).

Task 11 – Water Recycling Loans

Objectives: CALFED agencies provide low interest loans to local entities to help them overcome financial barriers to water recycling.

Planned Activities: To maximize the use of future appropriations of state monies for grant funding, the SWRCB will utilize the existing State Revolving Fund (SRF) Loan Program to provide low interest loans for water recycling projects.

Task 12 – Water Recycling Grants

Objectives: CALFED agencies use grants to help local entities recycle water.

Planned Activities: The SWRCB proposes to award future funding that becomes available for water recycling grants through their Water Recycling Construction program during Year 3 (Product 12.01). However, if Proposition 50 is passed in November, 2002, these funds may not become available until the July 2003 State Budget. Therefore, further grant funding may not be available to administer to local agencies for water recycling projects during Year 3. At this time, the SWRCB proposes approximately \$20 Million of grant funding needed for projects that are ready to proceed with design and construction.

During Year 3 the USBR will award \$19.7 million in water recycling grants through Title XVI (Product 12.02).

Task 13 - Water Recycling Technical Assistance

Objectives: CALFED agencies provide technical assistance to help local entities overcome technical hurdles in recycling water.

Planned Activities: The staff of DWR, SWRCB, and the CALFED Program will continue to participate in of the 2002 Water Recycling Task Force during Year 3 and expected to issue their final report in April 2003 (Product 13.01). CALFED Program and SWRCB staff will collaborate through the Task Force on estimating the costs and benefits of water recycling projects in California (Product 13.02).

Task 14 – Water Recycling Research Grants

Objectives: The SWRCB provides research grants according to the provisions of Proposition 13 to advance the state of knowledge on water recycling. Due to strong stakeholder need for funding of regional planning efforts and development of mandatory environmental documents, the SWRCB may consider the use of future grant funds to assist in this additional funding demand.

Planned Activities: The SWRCB, in conjunction with the 2002 Water Recycling Task Force, is currently considering the remaining \$1 Million of research funds to be granted towards statewide research needs identified by the Task Force. Additional areas of statewide research needs will be identified in the Task Force's final report to the legislature in April 2003.

Task 15 – Managed Wetlands Grants

Objectives: CALFED agencies could potentially provide grants to the operators of managed wetlands to help them improve water use efficiency.

Planned Activities: No grant funding has been identified for Managed Wetlands in Year 3. However, the USBR will work with the U.S. Fish and Wildlife Service to search for available resources.

Task 16 - Managed Wetlands Technical Assistance

Objectives: The USBR provides technical assistance to managed wetland operators to help them overcome technical hurdles to improved water use efficiency.

Planned Activities: The staff of USBR and the CALFED Program will continue work to incorporate Quantifiable Objectives into Draft Criteria for water management on wildlife refuges (Product 16.01).

Task 17 – Oversight and Coordination

Objectives: The CALFED Implementation MOU (attached to the ROD) delegated Oversight and Coordination activities to the CALFED Policy Group and CALFED Program Staff. The objective of Oversight is to assist CALFED agencies in interpreting the ROD and in identifying methods for implementing the intent of the ROD within their agencies existing mandates and authorities. The purpose of coordination is to facilitate communication – between CALFED agencies, CALFED Management Group, CALFED Policy Group, the Bay-Delta Public Advisory Committee (and its Subcommittees) – and thereby ensure effective and efficient implementation.

Planned Activities: CALFED Program staff will continue to provide guidance to WUE agencies in interpreting the ROD and continue to facilitate communications. Staff will continue to employ methods of informal communications, such as staff-level meetings and conference calls with agency staff dissemination of information. Staff will also engage in formal communications as necessary, such as reports to CALFED Management Group, CALFED Policy Group, the Bay-Delta Public Advisory Committee, and the WUE Subcommittee.

CALFED Program staff will also continue the following ongoing Oversight and Coordination activities:

- Coordinate the preparation of the WUE Annual Assessment and Work Plan (this document) with the staff of DWR, NRCS, SWRCB, and USBR (Product 17.01)
- Coordinate the preparation of the WUE Annual Report (ROD Action #114) with the staff of DWR, NRCS, SWRCB, and USBR (Product 17.02)
- Collect and review WUE tracking information for use in the CALFED Tracking System (Product 17.03)
- Convene approximately six meetings of the WUE Subcommittee (Product 17.04).

CALFED Program staff will also continue to lead implementation of Task 2, Water Measurement/Assurances and Task 4, Urban Water Conservation Certification (see task descriptions above).

B. Category A and B Programs/Funds

No changes in WUE Category A & B funding are anticipated at this time.

C. ROD Implementation Commitments

The following ROD Action is behind schedule but projected to be completed during Year 3:

- Define Appropriate Measurement (ROD #77): Due 12/31/01

The WUE Annual Report (ROD #114) is due during Year 3 (12/31/02) and is expected to be completed on schedule. Urban Water Conservation Certification (Action 113) is due during Year 3 (12/01/02) but is not expected to be fully implemented until after legislation is passed and the SWRCB promulgates regulations. This may not occur until late 2004.

Table 4 describes the WUE activities related to Environmental Justice (EJ).

Table 4. Schedule of WUE Reports to CALFED Management Group

The Environmental Justice Workplan prepared by the BDPAC Environmental Justice Subcommittee has been reviewed. Those activities that can be performed in Year 3 based on available staffing and funding are described in the table below.

Environmental Justice Workplan Tasks	Description of WUE Activity
EJ Subcommittee and CALFED Programs draft goals, objectives, strategies, and performance measures for integration of environmental justice into CALFED program element work plans with technical assistance from EJ reps on each Subcommittee, EJ Coordinator, and/or EJ Subcommittee.	WUE will work with EJ representatives and/or the EJ Coordinator to integrate EJ principles into their work plan.
Integrate EJ annual plan goals and objectives into program element work plans during program subcommittee meetings	The WUE Subcommittee will endeavor to integrate EJ goals & objectives into its activities.
Ensure at least one EJ representative on each BDPAC Subcommittee	The WUE Subcommittee has two EJ members: Conner Everts and Michael Stanley-Jones.
Develop specific criteria, guidelines, community partnership requirements, and outreach process for program PSP's that address existing and emerging environmental justice issues faced by low-income populations and communities of color in CALFED's solution area. Identify within scope of work and budget activities to address environmental justice objectives of the project.	Each of the three water conservation PSPs that DWR has released have included selection criteria related to environmental justice. Each of the PSP peer review panels has included EJ representatives.
For each meeting of the EJ Subcom, ensure participation of at least 1 CALFED program manager and appropriate Subcommittee chairs when appropriate, based on agenda	The WUE Subcommittee chair(s) and/or Program Manager will attend EJ Subcommittee meetings as appropriate, based on the agenda.

D. Management Group

Table 5 provides a schedule of the expected reports to CALFED Management Group.

Table 5. Schedule of WUE Reports to CALFED Management Group

Date	Topics	Purpose
Aug-02	Draft Urban Certification Framework	Briefing
	Draft Agricultural Assurances	Briefing
Oct-02	DWR's 2003 WUE PSP Criteria	Recommended Approval
Feb-03	Draft Def. of Appropriate Ag Water Meas.	Information
Feb-03	DWR's 2003 WUE PSP Report on Proposals	Information
Mar-03	DWR's 2003 WUE PSP Recom. Selection	Recommended Approval
May-03	Draft WUE Finance Proposal	Recommended Approval
	Draft Def. of Appropriate Meas. (Ag/Urban)	Recommended Approval
	Report on Quantifiable Objectives	Information
	Report on WUE Science	Information
	Draft WUE Technical Assistance Plan	Recommended Approval

In addition, the SWRCB staff proposes submitting quarterly funding status report to the CALFED Management Group.

E. Public Participation

The CALFED WUE Subcommittee (to the BDPAC) will be the primary mechanism for public participation. The WUE Subcommittee is expected to meet at least four times during Year 3.

Other Ad Hoc stakeholder groups and public workshops will be held as needed to gain stakeholder input on the following specific issues:

- Definition of Appropriate Measurement of Agricultural Water Use (Independent Panel and Public Workshops)
- Definition of Appropriate Measurement of Urban Water Use (Undefined stakeholder process and Public Workshops)
- WUE Science Review Panel (Public meetings)
- WUE PSP – Grants and Loans (Public workshops)

CALFED WUE Staff and agencies will continue to participate in Environmental Justice and tribal outreach activities.

DWR conducted four WUE workshops throughout California in October, 2002 to inform local public agencies about the requirements for submitting grant and loan applications under the Proposition 13 Act.

On September 19, 2002 BDPAC accepted the following recommendations from the WUE Subcommittee:

- CALFED Policy Group adoption of Agricultural Water Use Efficiency Milestones Staff
- CALFED Policy Group adoption of Urban Water Conservation Certification Staff Proposal.

The Work Plan addresses necessary next steps to implement the staff proposals, consistent with the recommendations.

F. Agency participation

Coordination of WUE Implementation with participating CALFED agencies is essential for the successful implementation of the Water Use Efficiency Program. Although CALFED Program Staff serves as the lead entity for coordination, the success of the WUE element depends on teamwork and coordination activities of CALFED Agencies including the Department of Food and Agriculture, DWR, NRCS, SWRCB, and USBR. The staff of WUE agencies meet frequently to develop specific coordination efforts.

G. Science Review

Please refer to the description of planned activities of Task 1 - Science, Monitoring & Evaluation (Section II, A) for a discussion of planned scientific review.

NOTE: The Science Work Plan Executive Summary is under review by program staff. Upon completion of this review, changes and additions may be made to this section of the Work Plan.

H. Budget by Task

Please see Table 6, attached.

SECTION III – STAGE 1

A. Stage 1 Projected Expenditures

Projected WUE expenditures for Stage 1 are significantly different from those described in the ROD (Figure 1 and Table 5). The primary difference is the lack of Grant funding available for water conservation grants (for agriculture, urban, and managed wetlands) in years 2 and 3. This shortfall will significantly impact the anticipated performance of the WUE program element, especially in early years. This most directly affects ROD action 174 (Comprehensive 4-Year WUE Evaluation) – an important part of evaluating CALFED Program balance.

B. State, Federal, Local/Water User Cost Sharing

CALFED and WUE implementing agencies have appropriately documented the State and Federal investment in CALFED Category A WUE activities. These records indicate that state and federal investment in agricultural and urban water conservation is lagging far behind the levels called for in the ROD but that water recycling investment is ahead of schedule.

WUE agencies also have adequate records of local cost share contributed as a match to CALFED Grants and Loans. However, the ROD calls for an aggregate local cost share of 50% for WUE, which implies that CALFED should be accounting for purely local WUE investments. Activities have begun to accurately account for these investments.

Cost sharing for this program will be reviewed as part of the overall Finance Plan described in the Oversight & Coordination Work Plan.

Table 6. CALFED WUE – Year 3 Finances

CALFED Water Use Efficiency - Year 3 Finances										
(\$ in thousands)										
WUE	CALFED	DWR	SWRCB	State Subtotal	USBR	USEPA	NRCS	Federal Subtotal	Local/Us ^{er} er ²	Total
1. Science & Monitoring	\$1,022	\$187	\$0	\$1,209	\$4	\$0	\$0	\$4	\$0	\$1,213
Fund Source										
General Fund	\$72	\$187		\$259				\$0		\$259
Federal Trust Funds	\$950			\$950				\$0		\$950
Prop 13				\$0				\$0		\$0
Prop 50				\$0				\$0		\$0
Other State Funding ¹				\$0				\$0		\$0
W&RR				\$0	\$4			\$4		\$4
Matching				\$0				\$0		\$0
2. Water Measurement	\$396	\$38	\$0	\$434	\$8	\$0	\$0	\$8	\$0	\$442
Fund Source										
General Fund	\$396	\$38		\$434				\$0		\$434
Federal Trust Funds				\$0				\$0		\$0
Prop 204				\$0				\$0		\$0
Prop 13				\$0				\$0		\$0
Prop 50				\$0				\$0		\$0
Other State Funding ¹				\$0				\$0		\$0
W&RR				\$0	\$8			\$8		\$8
Matching				\$0				\$0		\$0
3. Quantifiable Objectives	\$807	\$150	\$0	\$957	\$8	\$0	\$0	\$8	\$0	\$965
Fund Source										
General Fund	\$57	\$75		\$132				\$0		\$132
Federal Trust Funds	\$750			\$750				\$0		\$750
Prop 13				\$0				\$0		\$0
Prop 50				\$0				\$0		\$0
Other State Funding ¹		\$75		\$75				\$0		\$75
W&RR				\$0	\$8			\$8		\$8
Matching				\$0				\$0		\$0
4. Certification	\$274	\$75	\$0	\$349	\$12	\$0	\$0	\$12	\$0	\$361
Fund Source										
General Fund	\$274	\$75		\$349				\$0		\$349
Federal Trust Funds				\$0				\$0		\$0
Prop 13				\$0				\$0		\$0
Prop 50				\$0				\$0		\$0
Other State Funding ¹				\$0				\$0		\$0
W&RR				\$0	\$12			\$12		\$12
Matching				\$0				\$0		\$0
5. Agricultural Loans	\$0	\$9,100	\$0	\$9,100	\$0	\$0	\$0	\$0	\$0	\$9,100
Fund Source										
General Fund				\$0				\$0		\$0
Federal Trust Funds				\$0				\$0		\$0
Prop 13		\$9,100		\$9,100				\$0		\$9,100
Prop 50				\$0				\$0		\$0
Other State Funding ¹				\$0				\$0		\$0
W&RR				\$0				\$0		\$0
Matching				\$0				\$0		\$0
6. Agricultural Grants	\$64	\$150	\$0	\$214	\$1,000	\$0	\$0	\$1,000	\$0	\$1,214
Fund Source										
General Fund	\$64	\$150		\$214				\$0		\$214
Federal Trust Funds				\$0				\$0		\$0
Prop 13				\$0				\$0		\$0
Prop 50				\$0				\$0		\$0
Other State Funding ¹				\$0				\$0		\$0
W&RR				\$0	\$1,000			\$1,000		\$1,000

Matching				\$0				\$0		\$0
7. Urban Loans	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Fund Source										
General Fund				\$0				\$0		\$0
Federal Trust Funds				\$0				\$0		\$0
Prop 13				\$0				\$0		\$0
Prop 50				\$0				\$0		\$0
Other State Funding ¹				\$0				\$0		\$0
W&RR				\$0				\$0		\$0
Matching				\$0				\$0		\$0
8. Urban Grants	\$64	\$18,685	\$0	\$18,749	\$610	\$0	\$0	\$610	\$11,000	\$30,359
Fund Source										
General Fund	\$64	\$350		\$414				\$0		\$414
Federal Trust Funds				\$0				\$0		\$0
Prop 13		\$18,335		\$18,335				\$0		\$18,335
Prop 50				\$0				\$0		\$0
Other State Funding ¹				\$0				\$0		\$0
W&RR				\$0	\$610			\$610		\$610
Matching				\$0				\$0	\$11,000	\$11,000
9. Agricultural Tech Ast	\$0	\$1,775	\$0	\$1,775	\$214	\$0	\$0	\$214	\$0	\$1,989
Fund Source										
General Fund		\$998		\$998				\$0		\$998
Federal Trust Funds				\$0				\$0		\$0
Prop 13				\$0				\$0		\$0
Prop 50				\$0				\$0		\$0
Other State Funding ¹		\$777		\$777				\$0		\$777
W&RR				\$0	\$214			\$214		\$214
Matching				\$0				\$0		\$0
10. Urban Tech Ast	\$0	\$1,576	\$0	\$1,576	\$100	\$0	\$0	\$100	\$0	\$1,676
Fund Source										
General Fund		\$510		\$510				\$0		\$510
Federal Trust Funds				\$0				\$0		\$0
Prop 13				\$0				\$0		\$0
Prop 50				\$0				\$0		\$0
Other State Funding ¹		\$1,066		\$1,066				\$0		\$1,066
W&RR				\$0	\$100			\$100		\$100
Matching				\$0				\$0		\$0
11. Water Recycling Loans	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Fund Source										
General Fund				\$0				\$0		\$0
Federal Trust Funds				\$0				\$0		\$0
Prop 13				\$0				\$0		\$0
Prop 50				\$0				\$0		\$0
Other State Funding ¹				\$0				\$0		\$0
W&RR				\$0				\$0		\$0
Matching				\$0				\$0		\$0
12. Water Recycling Grants	\$0	\$0	\$26,500	\$26,500	\$15,900	\$0	\$0	\$15,900	\$212,028	\$254,428
Fund Source										
General Fund				\$0				\$0		\$0
Federal Trust Funds				\$0				\$0		\$0
Prop 13			\$16,500	\$16,500				\$0		\$16,500
Prop 50			\$10,000	\$10,000				\$0		\$10,000
Other State Funding ¹				\$0				\$0		\$0
W&RR				\$0	\$15,900			\$15,900		\$15,900
Matching				\$0				\$0	\$212,028	\$212,028
13. Water Recy Tech Ast	\$0	\$523	\$0	\$523	\$160	\$0	\$0	\$160	\$0	\$683
Fund Source										
General Fund		\$523		\$523				\$0		\$523
Federal Trust Funds				\$0				\$0		\$0
Prop 13				\$0				\$0		\$0
Prop 50				\$0				\$0		\$0
Other State Funding ¹				\$0				\$0		\$0
W&RR				\$0	\$160			\$160		\$160
Matching				\$0				\$0		\$0

14. Wtr Rec Resrch Grants	\$0	\$0	\$1,000	\$1,000	\$0	\$0	\$0	\$0	\$0	\$1,000
Fund Source										
General Fund				\$0				\$0		\$0
Federal Trust Funds				\$0				\$0		\$0
Prop 13			\$1,000	\$1,000				\$0		\$1,000
Prop 50				\$0				\$0		\$0
Other State Funding ¹				\$0				\$0		\$0
W&RR				\$0				\$0		\$0
Matching				\$0				\$0		\$0
15. Mgd Wetlands Grants	\$0	\$0	\$0	\$0	\$20	\$0	\$0	\$20	\$0	\$20
Fund Source										
General Fund				\$0				\$0		\$0
Federal Trust Funds				\$0				\$0		\$0
Prop 13				\$0				\$0		\$0
Prop 50				\$0				\$0		\$0
Other State Funding ¹				\$0				\$0		\$0
W&RR				\$0	\$20			\$20		\$20
Matching				\$0				\$0		\$0
16. Mgd Wetlands Tech Ast	\$16	\$0	\$0	\$16	\$20	\$0	\$0	\$20	\$0	\$36
Fund Source										
General Fund	\$16			\$16				\$0		\$16
Federal Trust Funds				\$0				\$0		\$0
Prop 13				\$0				\$0		\$0
Prop 50				\$0				\$0		\$0
Other State Funding ¹				\$0				\$0		\$0
W&RR				\$0	\$20			\$20		\$20
Matching				\$0				\$0		\$0
17. Oversight & Coordination	\$313	\$0	\$0	\$313	\$0	\$0	\$0	\$0	\$0	\$313
Fund Source										
General Fund	\$313			\$313				\$0		\$313
Federal Trust Funds				\$0				\$0		\$0
Prop 13				\$0				\$0		\$0
Prop 50				\$0				\$0		\$0
Other State Funding ¹				\$0				\$0		\$0
W&RR				\$0				\$0		\$0
Matching				\$0				\$0		\$0
WUE	CALFED	DWR	SWRCB	State Subtotal	USBR	USEPA	NRCS	Federal Subtotal	Local/Us²er	Total
WUE Approved Funding	\$2,956	\$32,259	\$27,500	\$62,715	\$18,056	\$0	\$0	\$18,056	\$223,028	\$303,799
General Fund	\$1,256	\$2,906		\$4,162				\$0		\$4,162
Federal Trust Funds	\$1,700			\$1,700				\$0		\$1,700
Prop 13		\$27,435	\$17,500	\$44,935				\$0		\$44,935
Prop 50			\$10,000	\$10,000				\$0		\$10,000
Other State Funding ¹		\$1,918	\$0	\$1,918				\$0		\$1,918
W&RR				\$0	\$18,056			\$18,056		\$18,056
Matching				\$0				\$0	\$223,028	\$223,028

¹ Funding from various DWR sources including Renewable Resources Investment fund & Energy Resources Program account

² For local/User funding, include only projected matching funds associated with grants, loans and other local assistance. SWP and CVPIA RF should be listed under DWR and USBR respectively.

Appendix A. Descriptions & Deadlines of ROD Actions

ROD		Action Title	Description of Commitment	Deadline
No.	Page			
34	61	Program Implementation Plan	Prepare a program implementation plan, including proposed organizational structure consistent with the overall CALFED governance structure, responsibilities for technical assistance programs and the grant/loan program, and evaluation procedures	12/31/00
35	62	Public advisory committee	Advisory committee to advise State and Federal agencies on structure and implementation of assistance programs and coordinate Federal, State, regional and local efforts	12/31/00
78	60	Loan & Grant Program	Implement an incentive-based program which will provide grants (or cooperative agreements) or loans to the most promising water use efficiency projects including urban, Ag, recycling.	01/01/01
76	62	Finance proposal	Develop a detailed finance proposal for Stage 1, including an evaluation of local cost share potential	07/31/01
171	61	Refine Quantifiable Objectives	Finish current work on Quantifiable Objectives and refine Targeted Benefits based on public comments and results of First RFP	Not specified
79	62	Establish Milestones	Establish specific milestones and associated benefits, remedies and/or consequences to track and guide the implementation of Agricultural Water Use Efficiency Program	08/27/01
80, 114, 142, 177, 193, 270, 233	64	Annual Report	CALFED will require annual reports from implementing agencies describing progress of implementation efforts	12/31/01 (80), 12/31/02 (114), 12/31/03 (142), 12/31/04 (177), 12/31/05 (193), 12/31/06 (270), 12/31/07 (233)
77	63	Define Appropriate Measurement	Prepare a consensus definition of appropriate measurement	12/31/01
113	62	Urban BMP Certification	Implement a process for certification of water suppliers' compliance with the terms of the urban MOU, including implementation of best management practices for urban water conservation	12/01/02
141	63	Water Measurement Legislation	Work with California State Legislature to develop legislation for introduction and enactment in 2003 legislative session requiring the appropriate measurement of all water uses in the State of California	12/01/03
173	64	Determine Funding Needs	Determine additional funding needs	06/01/04
175	62	Technical assistance	Provide technical assistance to urban agencies and agricultural districts developing management plans under Urban WM Planning Act and AB 3616 process [Includes Cooperative Agreements with AWMC & CUWCC and agency technical assistance and sponsored research]	12/01/04
174	62	Comprehensive 4-year evaluation	Conduct a comprehensive evaluation of the Program's first 4 years, and make appropriate additional State and Federal investments and actions to assure continued aggressive implementation of water use efficiency measures in the State.	12/31/04
176	62	Update Finance Plan	Make appropriate additional State and Federal investments and actions to assure continued aggressive implementation of WUE measures in State.	12/31/04
268	76	Performance Measures and Indicators	Establish performance measures and indicators, and a consistent strategy of ongoing development of these for each program area	Not specified
269	63, 53 & 72	Remove Transfer Disincentives	Develop and support proposals to transfer water savings credits to landowners, not irrigation and water supply agencies	Not specified